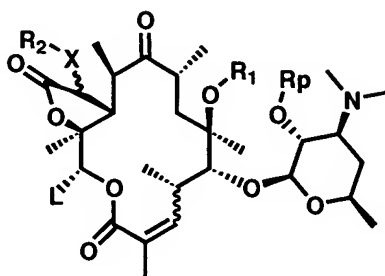


WHAT IS CLAIMED IS:

1. A compound represented by the formula



(I)

- 5 and the pharmaceutically acceptable salts, esters and prodrugs thereof,  
wherein

L is selected from the group consisting of:

- (1)  $-\text{CH}(\text{OH})\text{CH}_3$ ;
- (2)  $\text{C}_1$ - $\text{C}_6$  alkyl, optionally substituted with one or more substituents selected  
10 from the group consisting of aryl, substituted aryl, heteroaryl and substituted  
heteroaryl;
- (3)  $\text{C}_2$ - $\text{C}_6$  alkenyl, optionally substituted with one or more substituents  
selected from the group consisting of aryl, substituted aryl, heteroaryl  
and substituted heteroaryl; and
- 15 (4)  $\text{C}_2$ - $\text{C}_6$  alkynyl, optionally substituted with one or more substituents  
selected from the group consisting of aryl, substituted aryl, heteroaryl  
and substituted heteroaryl;

- 20  $\text{R}_1$  is selected from the group consisting of  $\text{C}_1$ - $\text{C}_6$ -alkyl,  $\text{C}_2$ - $\text{C}_6$ -alkenyl and  $\text{C}_2$ - $\text{C}_6$ -alkynyl,  
each optionally substituted with one or more substituents selected from the group  
consisting of:

- (1) halogen;
- (2) aryl;
- (3) substituted aryl;
- (4) heteroaryl;
- 25 (5) substituted heteroaryl;
- (6)  $-\text{O}-\text{R}_5$ , where  $\text{R}_5$  is selected from the group consisting of:
  - a. hydrogen;
  - b. aryl;

- c. substituted aryl;
- d. heteroaryl; and
- e. substituted heteroaryl;

(7) -O-C<sub>1</sub>-C<sub>6</sub>-alkyl-R<sub>5</sub>, where R<sub>5</sub> is as previously defined;

(8) -O-C<sub>2</sub>-C<sub>6</sub>-alkenyl-R<sub>5</sub>, where R<sub>5</sub> is as previously defined;

(9) -O-C<sub>2</sub>-C<sub>6</sub>-alkynyl-R<sub>5</sub>, where R<sub>5</sub> is as previously defined; and

(10) -NR<sub>6</sub>R<sub>7</sub>, where R<sub>6</sub> and R<sub>7</sub> are each independently selected from the group consisting of: hydrogen; C<sub>1</sub>-C<sub>6</sub>-alkyl, optionally substituted with one or more substituents selected from the group consisting of halogen, aryl, substituted aryl, heterocyclic and substituted heterocyclic; C<sub>2</sub>-C<sub>6</sub>-alkenyl, optionally substituted with one or more substituents selected from the group consisting of halogen, aryl, substituted aryl, heterocyclic and substituted heterocyclic; and C<sub>2</sub>-C<sub>6</sub>-alkynyl, optionally substituted with one or more substituents selected from the group consisting of halogen, aryl, substituted aryl, heterocyclic and substituted heterocyclic; or R<sub>6</sub>R<sub>7</sub> taken together with the nitrogen atom to which they are connected form a 3- to 7-membered ring which may optionally contain one or more hetero functions selected from the group consisting of -O-, -NH-, -N(C<sub>1</sub>-C<sub>6</sub>-alkyl)-, -N(aryl)-, -N(heteroaryl)-, -S-, -S(O)- and -S(O)<sub>2</sub>-;

R<sub>2</sub> is selected from the group consisting of:

(1) hydrogen;

(2) C<sub>1</sub>-C<sub>6</sub>-alkyl, optionally substituted with one or more substituents selected from the group consisting of:

- a. halogen;
- b. aryl;
- c. substituted aryl;
- d. heterocyclic;
- e. substituted heterocyclic;

f. -O-R<sub>3</sub>, where R<sub>3</sub> is selected from the group consisting of:

- i. hydrogen;
- ii. aryl;
- iii. substituted aryl;

iv. heteroaryl; and

v. substituted heteroaryl;

g.  $-O-C_1-C_6\text{-alkyl-}R_3$ , where  $R_3$  is as previously defined;

h.  $-O-C_2-C_6\text{-alkenyl-}R_3$ , where  $R_3$  is as previously defined;

5 i.  $-O-C_2-C_6\text{-alkynyl-}R_3$ , where  $R_3$  is as previously defined; and

j.  $-NR_6R_7$ , where  $R_6$  and  $R_7$  are as previously defined;

(3)  $C_2-C_6\text{-alkenyl}$ , optionally substituted with one or more substituents selected from the group consisting of:

a. halogen;

10 b. aryl;

c. substituted aryl;

d. heterocyclic;

e. substituted heterocyclic;

f.  $-O-R_3$ , where  $R_3$  is as previously defined;

15 g.  $-O-C_1-C_6\text{-alkyl-}R_3$ , where  $R_3$  is as previously defined;

h.  $-O-C_2-C_6\text{-alkenyl-}R_3$ , where  $R_3$  is as previously defined;

i.  $-O-C_2-C_6\text{-alkynyl-}R_3$ , where  $R_3$  is as previously defined; and

j.  $-NR_6R_7$ , where  $R_6$  and  $R_7$  are as previously defined; and

(4)  $C_2-C_6\text{-alkynyl}$ , optionally substituted with one or more substituents selected from the group consisting of:

a. halogen;

b. aryl;

c. substituted aryl;

d. heterocyclic;

25 e. substituted heterocyclic;

f.  $-O-R_3$ , where  $R_3$  is as previously defined;

g.  $-O-C_1-C_6\text{-alkyl-}R_3$ , where  $R_3$  is as previously defined;

h.  $-O-C_2-C_6\text{-alkenyl-}R_3$ , where  $R_3$  is as previously defined;

i.  $-O-C_2-C_6\text{-alkynyl-}R_3$ , where  $R_3$  is as previously defined; and

30 j.  $-NR_6R_7$ , where  $R_6$  and  $R_7$  are as previously defined;

X is selected from the group consisting of:

(a)  $S(O)_n$ , where n is 0, 1, or 2;

(b) O; and

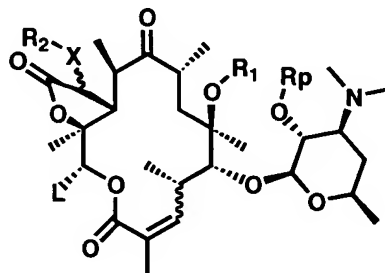
(c)  $\text{NR}_5$ , where  $\text{R}_5$  is as previously defined;  
and

$\text{R}_p$  is hydrogen or a hydroxy protecting group.

- 5           2.       A compound according to Claim 1 wherein  $\text{L}$  is  $\text{CH}_2\text{CH}_3$ ,  $\text{X}$  is  $-\text{S}-$ ,  $\text{R}_1$  is  $\text{CH}_3$  and  $\text{R}_2$  and  $\text{R}_p$  are as defined in Claim 1.
3.       A compound according to Claim 1 which is selected from the group consisting of:  
Compound of formula (I):  $\text{L} = \text{CH}_2\text{CH}_3$ ,  $\text{X} = \text{S}$ ,  $\text{R}_1 = \text{CH}_3$ ,  $\text{R}_2 = 2\text{-[6-(dimethylamino)purin-9-yl]-ethyl}$  and  $\text{R}_p = \text{H}$ ;  
10   Compound of formula (I):  $\text{L} = \text{CH}_2\text{CH}_3$ ,  $\text{X} = \text{S}$ ,  $\text{R}_1 = \text{CH}_3$ ,  $\text{R}_2 = 2\text{-(6-amino-purin-yl)-ethyl}$  and  $\text{R}_p = \text{H}$ ;  
Compound of formula (I):  $\text{L} = \text{CH}_2\text{CH}_3$ ,  $\text{X} = \text{S}$ ,  $\text{R}_1 = \text{CH}_3$ ,  $\text{R}_2 = 3\text{-(3-pyridinyl)-1H-pyrazole-ethyl}$  and  $\text{R}_p = \text{H}$ ;  
15   Compound of formula (I):  $\text{L} = \text{CH}_2\text{CH}_3$ ,  $\text{X} = \text{S}$ ,  $\text{R}_1 = \text{CH}_3$ ,  $\text{R}_2 = [3\text{-(3-pyridinyl)-1H-1,2,4-triazole-1-yl]-ethyl}$  and  $\text{R}_p = \text{H}$ ;  
Compound of formula (I):  $\text{L} = \text{CH}_2\text{CH}_3$ ,  $\text{X} = \text{S}$ ,  $\text{R}_1 = \text{CH}_3$ ,  $\text{R}_2 = [4\text{-(3-pyridinyl)-1H-imidazole-1-ethyl}]$  and  $\text{R}_p = \text{H}$ ; and  
20   Compound of formula (I):  $\text{L} = \text{CH}_2\text{CH}_3$ ,  $\text{X} = \text{O}$ ,  $\text{R}_1 = \text{CH}_3$ ,  $\text{R}_2 = \text{CH}_2\text{CH}_2\text{-phenyl}$  and  $\text{R}_p = \text{H}$ .
4.       A pharmaceutical composition comprising a therapeutically effective amount of a compound of Claim 1, or a pharmaceutically-acceptable salt, ester or prodrug thereof, in combination with a pharmaceutically acceptable carrier.
5.       A method for controlling a bacterial infection in an animal comprising

administering to an animal a therapeutically-effective amount of a pharmaceutical composition according to Claim 4.

6. A process for preparing a compound represented by the formula

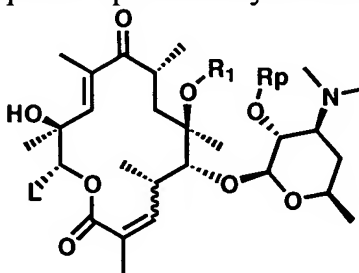


(I)

wherein L, X,  $R_1$ ,  $R_2$ , and  $R_p$  are as defined in Claim 1,

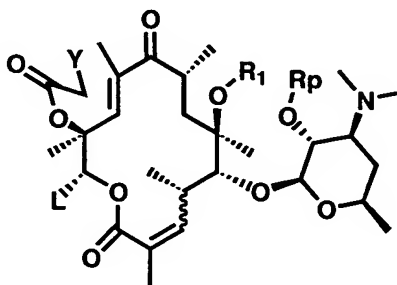
the method comprising

- (a) acylating a compound represented by the formula



wherein L and  $R_1$  are as defined in Claim 1 and  $R_p$  is a hydroxy protecting group,

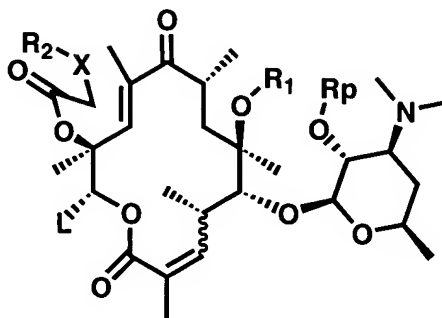
by reaction with a carboxylic acid, optionally in the presence of a catalyst, optionally in the presence of a dehydration reagent and optionally in the presence of a base in an aprotic organic solvent to provide a product represented by the formula



wherein L,  $R_1$ , and  $R_p$  are as defined in Claim 1, and where Y is halogen;

- (b) reacting a compound from step a with an anion of  $R_2-X-M$  where  $R_2$  and X are as defined in Claim 1,  $R_p$  is a hydroxy protecting group and M is sodium, potassium, or lithium, or  $R_2-X-H$  in the presence of a base in the presence of an aprotic solvent at a

temperature from  $-20^{\circ}\text{C}$  to  $50^{\circ}\text{C}$  for 1-48 hours to provide compound represented by the formula



- 5 wherein L, R<sub>1</sub>, R<sub>2</sub>, R<sub>p</sub> and X are as defined in Claim 1; and
- (c) reacting a compound from step b with a base in organic solvent to effect cyclization to provide a compound of formula (I).